

Work Order ID 94855

December-20-12 10:06:39 AM

slip Eb 10

94855

Page 1

Item ID: D3795-3

Accept

N900040100

Setup Start *NS1*

Revision ID:

Item Name: Ski Mid

Stop *NS2*

Start Date: 20/12/2012 Start Qty: 14.00

14

Cust Item ID:

Required Date: 03/01/2013 Req'd Qty: 14.00

14

Customer:

Reference:

Approvals:

Process Plan: MLS

Date: 12-12-20

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D3795

C

110

110

FLOW WATER JET

0.00

Waterjet

Memo

0.00

FLOW CNC Waterjet

1-Cut as per Dwg File D3795-3 Blank

1"

2-Deburr if necessary

16 0 Jm 13-1-10

120

120

HAAS CNC VERTICAL MACHINING #1

0.00

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1

1- Mill as per Folio FA732 Rev: AA & Dwg D3795 Rev: C

2-Deburr per dwg D3795

13/01/15
D.A. 13/01/14

16 0 DAS 08 9-83

130

130

QC2- Inspect parts off machine FAI/FAIB

0.00

QC

Memo

0.00

Quality Control

D.A. 13/01/14

16 0 DAS 08 9-83

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data <input type="checkbox"/>											
Equip/Tooling <input type="checkbox"/>											
Operator <input type="checkbox"/>											
Material <input type="checkbox"/>											
Setup <input type="checkbox"/>											
Other <input type="checkbox"/>											
Process <input type="checkbox"/>											
Supplier <input type="checkbox"/>											
Training <input type="checkbox"/>											
Unapproved <input type="checkbox"/>											
FAULT CATEGORY											
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube			General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio			<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions			<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other		

Work Order ID 94855

December-20-12 10:06:39 AM

94855

Page 2

Item ID: D3795-3

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Ski Mid

Start Date: 20/12/2012 Start Qty: 14.00

14

Cust Item ID:

Required Date: 03/01/2013 Req'd Qty: 14.00

14

Customer:

Reference:

Approvals:

Process Plan:

Date: / /

Tooling:

Date: / /

Run Start ***NR1***

QC:

Date: / /

SPC (Y/N):

Date: / /

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

140

QC8- Inspect parts - second check

0.00

140

QC

Memo

0.00

Quality Control

16

DAS 25 13-01-16

150

Identify as per dwg & Stock Location: _____

0.00

150

Packaging

Memo

572692X

0.00

Packaging

PPR-14x 94855

13/01/17 16

160

QC21- Final Inspection - Work Order Release

0.00

160

QC

Memo

0.00

Quality Control

13/1/17

13-01-17

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

FAULT CATEGORY

Landing Gear	General	Other	Other
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain	<input type="checkbox"/> Ovalized
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware	<input type="checkbox"/> Over/Under tolerance
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete	<input type="checkbox"/> Part Incorrect
<input type="checkbox"/> Crushed/Crimped	<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear	<input type="checkbox"/> Part Lost/Missing
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance	<input type="checkbox"/> Part Moved
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Mislabeled	<input type="checkbox"/> Positioned Wrong
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread	<input type="checkbox"/> Power Loss/Surge
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset	<input type="checkbox"/> Pressure/Forced
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration	<input type="checkbox"/> Temperature/Cure
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Weld
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Wrong Stock Pulled
			<input type="checkbox"/> Other

Picklist Print

December-20-12 10:06:43 AM

Page 1

Work Order ID: 94855

94855

Parent Item: D3795-3

D3795-3

Parent Item Name: Ski Mid

Start Date: 20/12/2012

Required Date: 03/01/2013

Start Qty: 14.00

Required Qty: 14.00

Comments: IPP Rev:A New Issue 08-07-18 JLM Verified By:DD
 IPP Rev:B 08-09-10 revA as per dwg (ecn 08-513) DD VERF:EC IPP
 REV:C 12.09.06 PER DWG REV.B DD VERF:JFS IPP REV
 C:12.09-12 AS PER REV C JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

MUHMWB10		Purchased	No			110	sf	296.4950	5.9	86.94737			
										**	90 S.F.		JM 13-1-10

MUHMWB10

UHMW 1" Black

Location

Loc Qty

Loc Code

MAT019

296.4949895

121278

12.0949895

122575

47.6

123229

53

123704

63.8

123949

120

124167

124167.

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>					
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Other <input type="checkbox"/>											
Process <input type="checkbox"/>											
Supplier <input type="checkbox"/>											
Training <input type="checkbox"/>											
Unapproved <input type="checkbox"/>											

FAULT CATEGORY									
Landing Gear			General						
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain	<input type="checkbox"/> Ovalized	<input type="checkbox"/> Pressure/Forced					
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware	<input type="checkbox"/> Over/Under tolerance	<input type="checkbox"/> Temperature/Cure					
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete	<input type="checkbox"/> Part Incorrect	<input type="checkbox"/> Weld					
<input type="checkbox"/> Crushed/Crimped	<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear	<input type="checkbox"/> Part Lost/Missing	<input type="checkbox"/> Wrong Stock Pulled					
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance	<input type="checkbox"/> Part Moved						
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Mislabeled	<input type="checkbox"/> Positioned Wrong						
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread	<input type="checkbox"/> Power Loss/Surge	<input type="checkbox"/> Other					
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset							
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration							
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence							
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions							

DART AEROSPACE LTD		Work Order:	948 ST
Description: Ski, Mid Section		Part Number:	D3795-3
Inspection Dwg: D3795	Rev: C	Page 1 of 1	

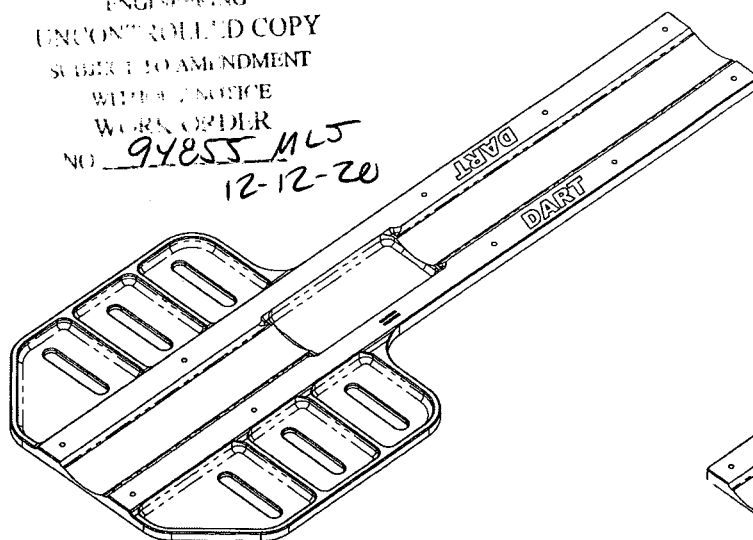
FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
R0.13	+/-0.030	R0.125	✓		R-6	ref.
Ø0.261	+0.006/-0.001	Ø0.260	✓		Vern	GA-01
Ø0.93	+/-0.030	Ø0.930	✓		"	"
0.30	+/-0.030	0.305	✓		D-6	GA-08
48.00	+/-0.030	48.00	✓		Tape	GA-12
47.000	+/-0.010	47.000	✓		"	"
39.333	+/-0.010	39.333	✓		"	"
31.667	+/-0.010	31.667	✓		"	"
24.000	+/-0.010	24.00	✓		"	"
16.333	+/-0.010	16.333	✓		"	"
8.667	+/-0.010	8.667	✓		Vern	CNC-02
1.000	+/-0.010	1.000	✓		Vern	GA-01
0.95	+0.030/-0.010	0.963	✓		"	"
0.050 x 45°	+/-0.010 x +/-0.5°	0.060x45°	✓		"	"
0.19 x 45°	+/-0.030 x +/-0.5°	0.185x45°	✓		"	"
0.38	+0.030/-0.010	0.385	✓		"	"
5.000	+/-0.010	5.000	✓		"	"
0.063 x 45°	+/-0.010 x +/-0.5°	0.060x45°	✓		"	"
0.20	+0.030/-0.010	0.199	✓		D-6	ref.
R25	+/-0.030	R0.250	✓		R-6	ref.
3.40	+/-0.030	3.388	✓		Vern	GA-01
R2.64	+/-0.030	R2.640	✓		R-6	ref.

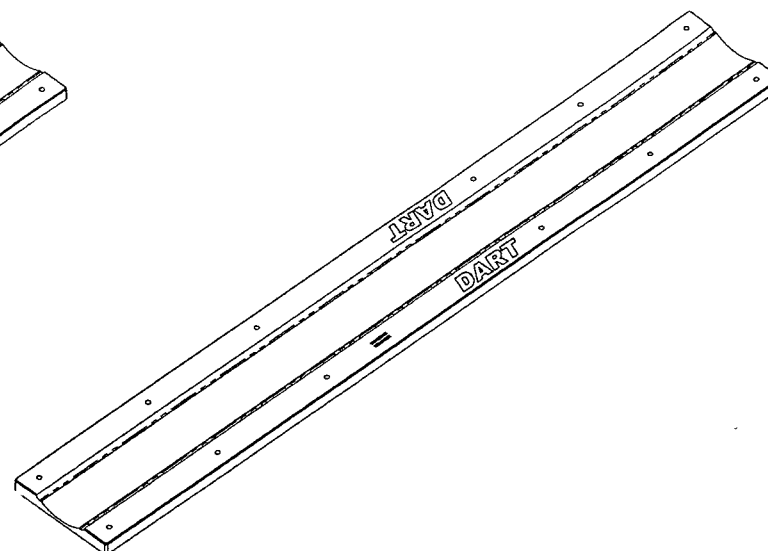
Measured by: D.A. 03	Audited by: DAS 25	Preliminary Approval:
Date: 13/01/14	Date: 15-01-16	Date:

Rev	Date	Change	Revised by	Approved
A	12.07.31	New Issue	KJ	
B	12.09.26	Dimensions updated per Dwg Rev C	KJ	

SUPER COPY
 RETURN TO
 ENGINEERING
 UNCONTROLLED COPY
 SUBJECT TO AMENDMENT
 WITHOUT NOTICE
 WORK ORDER
 NO 94855 ML5
12-12-20



D3795-1 412 SKI - FWD SECTION



D3795-3 412 SKI - MID SECTION

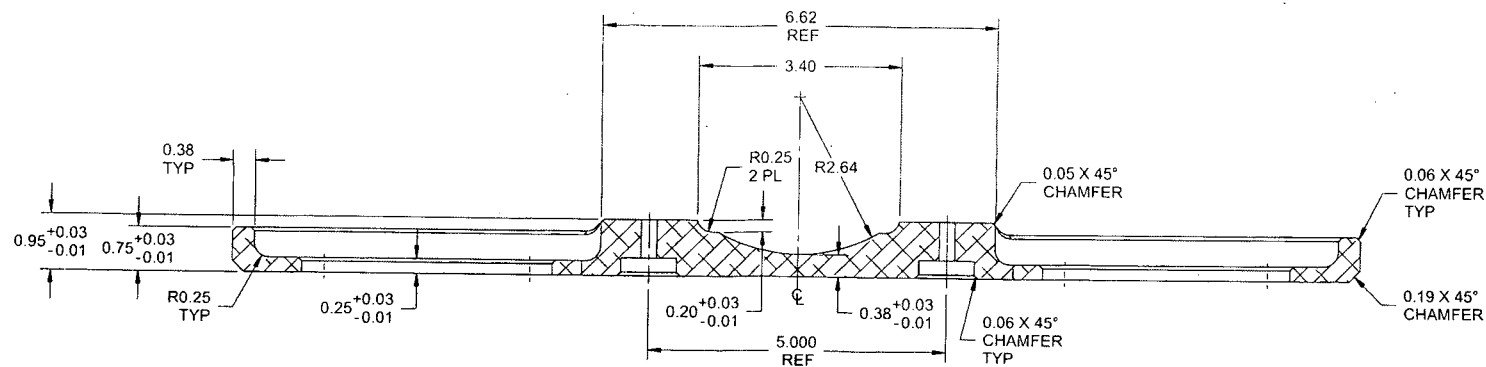
RELEASED
 2012-09-12

NOTES:

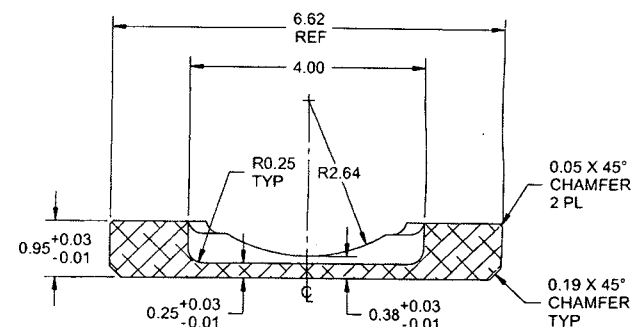
- 1) MATERIAL: UHMW BLACK TIVAR 1000 VIRGIN MATERIAL
REF DART SPEC MUHMWB
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: - ENGRAVE WITH DART P/N "D3795-X" AND B/N "BXXXXX" USING 0.13 HIGH LETTERS TO MAX DEPTH OF 0.010
- ENGRAVE WITH DART LOGO USING 1.00 HIGH LETTERS TO MAX DEPTH OF 0.012
- 7) WEIGHT: D3795-1 = 9.37 lbs
D3795-3 = 7.90 lbs

C	REMOVED UNNECESSARY COUNTERBORED HOLES IN D3795-3 (C5-3, D5-3)	AP	12.09.06
B	CHAMFER WAS 0.31 x 45° NOW 0.19 x 45° (B1-3)	AP	12.08.01
A	NEW ISSUE	MB	08.07.08
REV.	DESCRIPTION	BY	DATE
DESIGN	MB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AP		
CHECKED	SP	DRAWING NO.	REV. C
MFG. APPR.	SP	D3795	SHEET 1 OF 3
APPROVED	MB	TITLE	SCALE
DE APPR.	MB	412 SKI SECTIONS	NTS
DATE	12.09.06	COPYRIGHT © 2008 BY DART AEROSPACE LTD <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD</small>	

94855

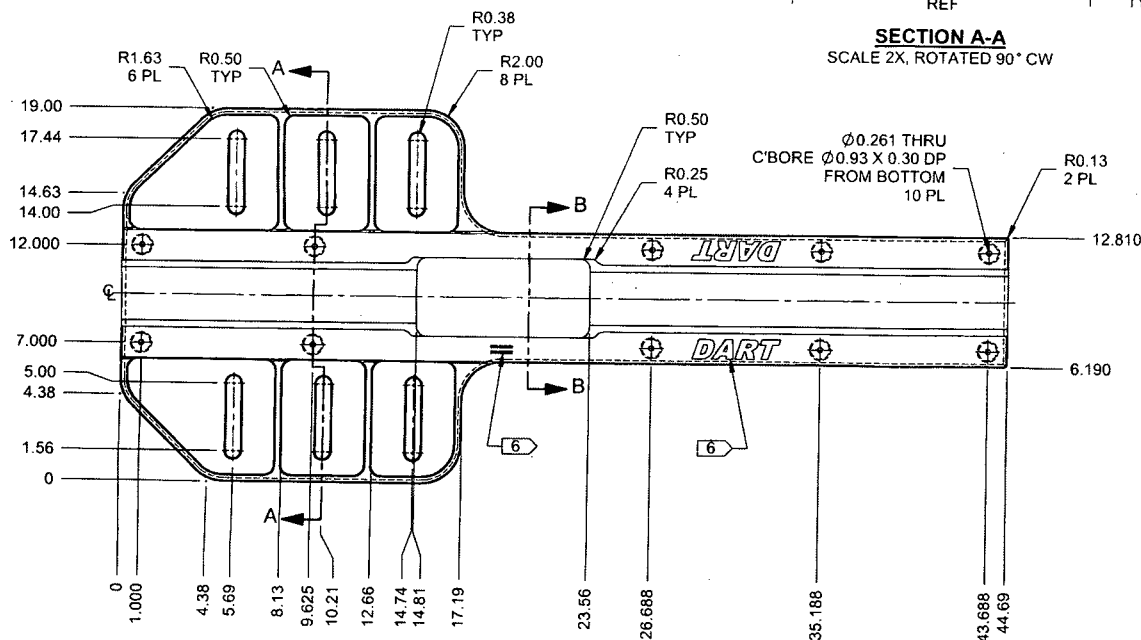


SECTION A-A
SCALE 2X, ROTATED 90° CW



SECTION B-B
SCALE 2X, ROTATED 90° CCW

RELEASED
2012-09-12



D3795-1 412 SKI - FWD SECTION

DESIGN	MB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AP		
CHECKED	<i>[Signature]</i>	DRAWING NO. D3795	REV. C
MFG. APPR.	<i>[Signature]</i>	TITLE	SHEET 2 OF 3
APPROVED	<i>[Signature]</i>	412 SKI SECTIONS	SCALE
DE APPR.	<i>[Signature]</i>		NTS
DATE	12.09.06	COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	

R0.13
4 PL

6.62
5.810

0.810
0

0
1.000

8.667

16.333

31.667

39.333

47.000

48.000

0.95^{+0.03}
-0.01

D3795-3 412 SKI - MID SECTION

0.05 X 45°
CHAMFER
TYP

0.19 X 45°
CHAMFER
2 PL

0.20^{+0.03}
-0.01

3.40

R0.25
2 PL

R2.64

0.05 X 45°
CHAMFER
TYP

0.19 X 45°
CHAMFER
2 PL

0.38^{+0.03}
-0.01

5.000
REF

**SECTION C-C
SCALE 2X**

Ø0.261 THRU
C BORE Ø0.93 X 0.30 DP
FROM BOTTOM
12 PL

94855

RELEASED
2012-09-12

DESIGN	MB	DART AEROSPACE LTD	
DRAWN	AP	HAWKESBURY, ONTARIO, CANADA	
CHECKED	VP	DRAWING NO. D3795	REV. C
MFG. APPR.	21	TITLE	SHEET 3 OF 3
APPROVED	14	412 SKI SECTIONS	
DE APPR.	14	NTS	
DATE	12.09.06	COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	